PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of **Inyup Kang**	**For: POWER COLLAPSE FOR A WIRELESS TERMINAL**
Serial No. 10/786,585	**Examiner: Simon Nguyen**
Filed: 02/24/2004	**Group No. 2618**

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant respectfully requests a pre-appeal brief review of claims 1-39 pending in U.S. Patent Application Serial No. 10/786,585. The claims were finally rejected by the Examiner in the Office Action dated June 15, 2007 ("6/15/07 OA") as allegedly being obvious over Yamada *et al.*, U.S. Application Serial No. 2003/0133337 ("Yamada") in view of Nonogaki, U.S. Patent No. 6,625,478 ("Nonogaki").

The Examiner indicated that Yamada discloses all elements of claim 1 except for the claim limitation "the always-on power domain … independently determines power on and off state of each of the at least one collapsible power domain." The Examiner stated that Nonogaki discloses this limitation.

A. Summary of Applicant's Argument

Applicant respectfully submits that claims 1-39 are patentable over Yamada in view of Nonogaki for the following reasons:

- Yamada does not disclose the claim limitation "the always-on power domain determines power on and off states of all of the at least one collapsible power domain."
- Nonogaki does not disclose the claim limitation of "an integrated circuit" having "the always-on power domain … independently determines power on and off state of each of the at least one collapsible power domain."
- The Examiner failed to show proper motivation, suggestion, or teaching to combine Yamada and Nonogaki in the manner recited by claims 1-39.

B. Claims 1-39 are Patentable over Yamada in view of Nonogaki

1. Yamada does not disclose the claim limitation "the always-on power domain determines power on and off states of all of the at least one collapsible power domain."

In Yamada, a non-controlled power supply group 2 and controlled power supply groups 3_1 through 3_n are connected in a daisy chain (see FIG. 1). The non-controlled power supply group 2 is always on and controls a power switch 8_1 for the first controlled power supply group 3_1. The first controlled power supply group 3_1 in turn controls a power switch for the next controlled power supply group. This daisy chain operation is clearly shown in FIG. 1 and described in paragraph [0036] of Yamada. FIG. 2 of Yamada shows another daisy chain design in which power supply group A (which is always on) controls only power switch 17 for power supply group B, which in turn controls power switch 18 for power supply group C. Given the daisy chain structures shown in FIGS. 1 and 2 of Yamada, it does not appear that the non-controlled power supply group 2 would be able to determine the power on and off states of all of the controlled power supply groups 3_1 through 3_n.

The Examiner stated on page 2 of the 6/15/07 OA that this claim limitation is disclosed by Yamada in paragraphs [0033] and [0042]. However, these paragraphs fail to disclose this claim limitation for the reasons noted on pages 11 and 12 of the Amendment dated April 2, 2007 ("4/2/07 Amendment").

2. Nonogaki does not disclose the claim limitation of "an integrated circuit" having "the always-on power domain … independently determines power on and off state of each of the at least one collapsible power domain."

Claim 1 of the present application recites an integrated circuit having at least one collapsible power domain that can be independently powered on and off. Nonogaki describes a portable telephone 100 having a power management controller 101, an AV processing block 200, a telephone processing block 300, and a common processing block 400. On page 9 of the 6/15/07 OA, the Examiner stated that the wireless phone of Nonogaki is an integrated circuit and that switches 104, 105 and 106 and blocks 101, 200, 300 and 400 are included inside the integrated circuit. The Examiner stated that column 6, lines 32-33 of Nonogaki supports this assertion.

The cited section of Nonogaki only briefly mentions a CMOS integrated circuit and does not describe blocks 101, 200, 300 and 400 being implemented on an integrated circuit, as asserted by the Examiner. Furthermore, FIG. 1 of Nonogaki suggests that blocks 101, 200, 300 and 400 would not be implemented on a single integrated circuit. Block 300 includes a receiver 312 and a transmitter 313 that are typically implemented on a radio frequency integrated circuit (RFIC) separate from a digital integrated circuit. Blocks 200, 300 and 400 also contain various elements typically not implemented on an integrated circuit. For example, oscillator 202 in block 200, oscillator 302, antenna 311 and microphone 317 in block 300, and display 404 and speaker 407 in block 400 are typically not implemented on an integrated circuit. Thus, blocks 101, 200, 300 and 400 are different parts of a wireless telephone and are not different sections of an integrated circuit.

3. The Examiner failed to show proper motivation, suggestion, or teaching to combine Yamada and Nonogaki in the manner recited by claims 1-39.

Yamada describes a semiconductor device 1 having multiple controlled power supply groups 3_1 through 3_n coupled in a daisy chain. Each group 3 includes a processing part 6 and a next-process necessity determining part 7. Each group performs processing for that group and determines whether the next group is necessary. A key innovation of Yamada appears to be the sequential manner in which the controlled power supply groups 3_1 through 3_n are turned on, one group at a time.

There is no suggestion or motivation to independently turn on and off each of the controlled power supply groups of Yamada. This independent operation would appear to teach away from a key feature of Yamada, which is to turn on the next controlled power supply group only when deemed necessary by the current power supply group. Furthermore, the daisy chain structure of Yamada does not support this independent operation. If a given power supply group is turned off by a prior power supply group, then no control signals can be generated to turn on any of the remaining power supply groups.

Nonogaki describes a wireless telephone 100 having different functional processing blocks 200, 300 and 400. Processing block 300 contains all elements for processing a signal received via an antenna 311. Semiconductor device 1 of Yamada may be one element of processing block 300 of Nonogaki. Thus, combining Yamada and Nonogaki might result in a wireless telephone having a telephone processing block 300 that is independently controlled, with processing block 300 including a semiconductor device 1 having multiple power supply groups that are controlled in a daisy chain manner. The combination of Yamada and Nonogaki would thus not result in the integrated circuit recited in claim 1 of the present application.

For the reasons noted above, Applicant submits that claims 1-39 are patentable over Yamada in view of Nonogaki.

C. Conclusion

The combination of Yamada and Nonogaki does not render obvious any of claims 1-39 for the reasons noted above. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1-39 and allowance of each of claims 1-39.

Respectfully submitted,

Dated: Oct. 15, 2007

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